AGAFONOV, I.B.; AGAFONOV, S.B.

Universal pull-type snowplow. Sel'khozmashina no.11:26 N '56.
(Snowplows) (MLRA 9:12)

TSFAS, B.S., dotsent, kand.tekhn.nauk; AGAFONOV, S.G., student

Determining the butt area and internal rigidity of compressed parts in a tight bolted joint. Sbor.dokl.Stud.nauch.ob-va Fak. mekh.sel'.Kuib.sel'khoz.inst. no. 1:95-103 '62. (MIRA 17:5)

1. Kuybyshevskiy sel'skokhozyaystvennyy institut.

AGAFONOV, S.L.; ALEKSEYEVA, A.N.; BELLYUSTINA, L.N.; GOLOV, I.I.; GUSEV, O.V.; DMITRIYEVA, V.I.; YEVLAMPIYEVA, F.A.; YELISEYEV, A.I.; ZHAVORONKOV, N.A.; ZHARKOV, S.A.; KIR'YANOV, I.A.; KRAYNOV, L.A.; KUSTOV, K.L.; LBOV, F.A.; LIPATOV, N.A.; LIPOVETSKIY, I.A.; MALYUGIN, V.N.; MARINOV, N.N.[deceased]; MIKHAYLOV, A.N.; POTAPOVA,Ye.D.; TRUKHMANOV, G.A.; UKHIN, V.A.; FILIPPOV, V.A.; CHEBURASHKIN, A.M.; SHKOTOV, A.T.; GARANINA, L.F., kand. fil. nauk

[The city of Gorkiy; a guidebook] Gorod Gor'kii, Volgo-Viatskoe knizhnoe izd-vo, 1964. 374 p. (MIRA 17:12)

AGAFONOV, S.S.; MIKHAYLOV, K.Ye., inzh.

Organization of linear operational communications within electric power plants. Elek.sta. 32 no.9:73-79 S '61. (MIRA 14:10)
(Electric power plants--Communication systems)

MUGERMAN, Yu.N., inzh.; AGAFONOV, S.K., tekhnik

Automatic welding up of a crater. Svar. proizv. no.1:32-33 Ja '65.
(MIRA 18:3)

AGAFONOV, T.I.

Volitional character manifestations under difficult conditions.
Vop.psikhol. 2 no.5:28-37 S-O '56. (MLRA 10:1)

1. Krasnodarskiy pedagogicheskiy institut.
(Character tests)

AGAFONOV, T.I., kandidat pedagogicheskikh nauk.

Some problems concerning the psychological principles underlying the work of students in agriculture. Biol.v shkole no.4:16-20 Jl-Ag '57. (MLRA 10:8)

1.Krasnodarskiy pedagogicheskiy institut.
(Agriculture--Study and teaching)

AGAFONOV, T.I.

Psychological and educational analysis of students' work in the collective farm fields. Politekh.obuch. no.6:19-24 Je '57. (MIRA 12:4)

1. Krasnodarskiy pedagogicheskiy institut.
(Field work (Educational method)) (Agriculture--Study and teaching)

AGAFONOV, T.I.

Extracurricular work in psychology. Vop. psikhol. 4 no.4: 144-148 Jl-Ag '58. (MIRA 11:11)
(Psychology--Study and teaching) (Teachers, Training of)

AGAFONOV, T. I.

Questions on the psychology of work. Politekh.obuch. no.10:76-78 O '58. (MIRA 11:11)

(Work) (Learning, Psychology of)

AGAFONOV, T.I.; DEREVTSOV, I.A.

Moral education in students' agricultural brigades. Politekh. obuch. no.10:12-16 O '59. (MIRA 13:2)

1. Krasnodarskiy pedagogicheskiy institut.
(Moral education)

AGAFONOV, T.N.

Main problems in the formation of the industrial complex in Kustanay Province. Trudy Otd. geog. AN Kazakh. SSR no.8:114-123 '61. (MIRA 14:8)

(Kustanay Province--Economic policy)

AID - P-174

Subject : USSR/Aeronautics

Card : 1/1

Author : Agafonov, V., Lt. Col.

Title : Landing of a Jet Aircraft

Periodical : Air Force Herald, 1, 44 - 47, Ja 1954

Abstract : In this article on jet-aircraft landing the following topics are discussed: Comparison with piston engine aircraft landing, landing with side wind, landing in winter, correction of mistakes, and training.

Institution : None

Submitted : No date

ONOPRIYENKO, A.; AGAFONOV, V.

Our achievements in two years. Muk.-elev.prom. 24 no.3:29 Mr '58. (MIRA 12:9)

1. Orekhovo-Zuyevskaya realizatsionnaya baza.
(Orekhovo-Zuyevo--Flour mills)
(Grain-handling machinery)

AGAFONOV, V.A.

Efforts to control air leakage through the receiving hopper for coal sorting in mines of the "Stalinugol'" Combine. Sbor. nauch.rab.stud.LGI no.2:150-153 '57. (MIRA 13:4)

1. Leningradskiy ordenov Lenina i Trudovogo Krasnogo Znameni gornyy institut im. G.V.Plekhanova. Predstavleno dotsentom L.P.Severinym.

(Mine ventilation)

VASIL'YEV, A. (Moskva); MATYUSHIN, A. (Moskva); MARCHENKOV, L. (Voronezh); AGAFONOV, V. (Krasnodarskiy kray); SMELOV, M. (Moskva); KRAMER, A. (Leningrad); RETSENS, L.; KAYROD, V.; YEFREMENKOV, M. (Moskovskaya obl.)

Suggestions of the readers. Radio no.8:46 Ag '62. (MIRA 15:8)
(Radio—Equipment and supplies)

AGAFONOV, V. A. DECEASED c.'62 1962/ /7

Shipbuilding

AGAFONOV, V.A., inzh.

Expansion of the lubrication layer in sliding bearings. Vest. mashinostr. 42 no.5:29-32 My '62. (MIRA 15:5)
(Bearings (Machinery)—Lubrication)

SKACHKOV, B.S., inzh.; AGAFONOV, V.B., inzh.

Operational characteristics of the TE3 diesel locomotive during the winter months. Elek. i tepl.tiaga 2 no.12:18-19 D '58. (MIRA 12:1)

(Diesel locomotives--Cold weather operation)

COUNTRY : USSR
CATEGORY :

ABS. JOUR. : RZBiol., No. 1, 1959, No. 283

AUTHOR : Agafonov, V. D.; Kevskiy, A. K.
INST.
TITLE : Experimental Heteroplasty of Preserved Arterial Trunks of Embryos.

ORIG. PUB. : Vestn. khirurgii, 1956, 77, No 11, 52-57

ABSTRACT : Vascular transplants (T) taken from 4-5-6 month old embryos of cattle, preserved for 1 to 60 days in the serum of Belen'kiy with addition of penicillin, were grafted to defects of arteries of dogs, measuring from 1 to 6 cm. Altogether 26 operations were performed. Arteriographic studies, conducted over periods from 10 to 180 days, showed complete passability of T in 18 cases; in 3 cases the lumen of the T was narrowed not more than by 1/3, and only in 5 cases, when length of T reached 5-6 cm and the duration of preservation exceeded 1 1/2 months, a complete disruption of passability of the vessel was observed. Histological studies conducted after

CARD: 1/2

37

CATEGORY :

ABS. JOUR. : RZBiol., No. 1, 1959, No. 283

AUTHOR :
:

ORIG. PUB. :

ABSTRACT : preservation for different periods (from 1 to 60 days), showed no apparent changes in structure of [illegible] preservation for up to 1 1/2 months. Study of [illegible] structure of heteroplastic grafts after periods [illegible] days, showed that after transplantation [illegible] not only from the artery of the recipient,

AGAFONOV, V.F., inzhener; YESIPOV, P.P., inzhener.

Removal of silicon from water by the dolomite method. Elek.sta. 25 no.9:51-52 S '54. (MLRA 7:9)
(Feed-water purification)

AGAFONOV, V.G.

SOV/132-59-9-5/13

14(5)

AUTHORS: Utkin, I.A., Isayev, M.I., Agafonov, V.G., and Galiga, A.A.

TITLE: The Utilization of Small Turbo-Drills for Core Drilling

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 9, pp 29-32 (USSR)

ABSTRACT: According to experimental data obtained from L.A. Shreyner, G.M. Pokrovskiy, A.A. Minin, and A.A. Pogarskiy, mechanical drilling speed increases with an increase in the number of rotations of the drilling bit. The authors state that the number of rotations must not exceed 300-400 rotations per minute even with ZIF types of drilling rigs, this limitation being due to the necessity of rotating the drive-pipes together with the drilling head. Thus the drilling productivity could be increased only when turbo-drills were used, in which case the drive-pipes do not rotate. The commercial drilling speed of turbo-drills is 1.8 times higher than that of rotary drilling and 5 times higher than with the ZIF-1200A rig. The use of the turbo-drill TSA-5 for structural drilling in Bashkiriya increased the drilling speed 5 times. The number of breakdowns were also cut down. For instance, the breakdown coefficient in the trust Bashkapudneftezavedka (Bashkapudneftezavedka Trust) decreased from 4.78 to 1.28 in comparison with rotary drilling. The small-sized drills were not widely used for the core-sample drilling, as only 20% of the core was satisfactorily extracted, when turbo cutters KTD3-5 (127 mm) or KTD3-5" were used. The problem was satisfactorily solved, when the VITR developed a new TSChM-5" turbo-drill. This drill is provided with special bits with armored cutters made of a hard alloy. The number (n) of such cutters for each bit was calculated according to the formula

$$n = \frac{R_{hyd}}{C_o}$$

Card 1/3

Card 2/3

where R_{hyd} is the hydraulic load on the axis of the turbo-drill in kg and C_o - permitted load for one cutter in kg. The RSChM-5" turbo-drill was tested on the Sridnitskaya ploshchad' treats L'vovmeteogazrazvedka (the Sridnitskaya Ploshchad' of the L'vovmeteogazrazvedka Trust) with the BU-40 installation and the US-5 pump. With this drill, 50 to 80% of the cores were extracted at a speed of 3.3 m/hour, whereas only 20 to 30% of the cores were extracted with the use of drive-pipe with the milling-cutter head SDK-Nr 8 and at a speed of 1.16 m/hour. It was also found that the mentioned drilling bits can be used for rock of up to VII category of drillability. The bits quickly wear out in harder rocks at a speed of 600-900 rotations per minute. There are 2 tables, 2 diagrams and 4 Soviet references.

ASSOCIATION: VITR

Card 3/3

AGAFONOV, V. G. C/1962 1964

DECEASED

PHYSIOLOGY
MORPHOLOGY
PHARMACOLOGY

AGAFONOV, V.I.

ROZHDESTVENSKIY, V.M.; KUCHERENKO, V.D.; KIKTENKO, V.S.; AGAFONOV, V.I.

Academician Daniil Kirillovich Zabolotnyi, outstanding scientist and humanitarian. Zhur. mikrobiol. epid. i immun. no.12:17-23 no.12:17-23 D '54. (MLRA 8:2)

(ZABOLOTNYI, DANIIL KIRILLOVICH, 1866-1929)

AGAFONOV, V.I.

ROZHDESTVENSKIY, V.M.; AGAFONOV, V.I.

Some theoretical problems in epidemiology. Zhur. mikrobiol. epid. i immun. no.1:20-24 Ja '55. (MLRA 8:2)
(EPIDEMIOLOGY,
in Russia)

GUSLITS, S.V.; SLAVIN, G.P.; AGAFONOV, V.I.; BEZDENEZHNYKH, I.S.; RALL', Yu.M., professor

"Course in specialized epidemiology." V.A.Bashenin. Reviewed by S.V.Guslits and others. Zhur. mikrobiol., epidem. i immun. 27 no.3:104-108 Mr' 56. (MLRA 9:7)
(EPIDEMIOLOGY) (BASHENIN, V.A.)

AGAFONOV, V.I.

Discussion of certain problems in the theory of epidemiology, conducted at the Academy of Medical Science of the U.S.S.R. Zhur.mikrobiol.epid. i immun. 27 no.10:105-113 O '56. (MIRA 9:11)
(EPIDEMIOLOGY,
theories, conf. (Rus))

SOV/177-58-2-21/21

17

AUTHORS: Mikhaylovskiy, V.T., Colonel in the Medical Service, Agafonov, V.I., Lieutenant Colonel in the Medical Service, Docent

TITLE: A Collection of Scientific Works on Natural-Breeding-Ground and Intestinal Infections in the Urals

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 2, pp 92-96 (USSR)

ABSTRACT: The article is a detailed review of this collection of articles.

Card 1/1

MIKHAYLOVSKIY, V.T., general-mayor med. sluzhby; AGAFONOV, V.I., polkovnik med. sluzhby, dots.

Some aspects of the prevention of influenza among troops of the Soviet Army in 1957. Voen.-med. zhur. no.6:53-59 Je '58. (MIRA 12:7)
(INFLUENZA, prevention and control,
Asian, in armed forces personnel (Rus))
(ARMED FORCES PERSONNEL, dis.
Asian influenza, prev. & control (Rus))

AGAFONOV, V.I.

Session of the editors and the editorial council of the "Zhurnal mikrobiologii, epidemiologii i immunobiologii." Zhur.mikrobiol. epid. i immun. 29 no.9:157-159 S'58 (MIRA 11:10)
(BACTERIOLOGY, MEDICAL--PERIODICALS)

AGAFONOV, V. I., ROZHDESTVENSKIY, V. M., KUZHYAKIN, A. P.
BEZDENEZHNYKH, I. S.

"Comparative analysis of the basic rules of the epizootic and epidemic processess."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

AGAFONOV, V.I., dotsent, polkovnik meditsinskoy sluzhby

Lessons from history must not be forgotten. Voen.-med.zhur. no.7:80-83 Jl '59. (MIRA 12:11)
(BACTERIOLOGICAL WARFARE)

AGAFONOV, V.I., dotsent, polkovnik meditsinskoy sluzhby; GAVRILOV, V.I., kand.med.nauk; SEMENOV, B.F., kand.med.nauk

Enteric viruses and diseases caused by them. Voen.-med.zhur. no.9: 35-41 S '59. (MIRA 13:1)
(VIRUS DISEASES)

AGAFONOV, V.I.

Plea for more consideration for theoretical problems in epidemiology; a discussion at the Academy of Medical Sciences of the U.S.S.R. on the mechanism of transmission of infection. Zhur.mikrobiol., epid.i immun. 30 no.11:120-124 N '59. (MIRA 13:3)
(COMMUNICABLE DISEASES transm.)

AGAFONOV, V. I. (Moskva)

Ychastiye retikulyarnoy formatsii v oblegchayushchem deystvin aminazina na sudorozhnuyu elektricheskvyu aktivnost'

report submitted for the First Moscow Conference on Reticular Formation, Moscow, 22-26 March 1960.

AGAFONOV, V. I. and MIKHAYLOVSKIY, V. T.

"Some results and problems with respect to further lowering the incidence of infectious disease among troops" - p. 3

Voyenno Meditsinskiy Zhurnal, No. 3, 1962

AGAFONOV, V.I., dotsent, polkovnik meditsinskoy sluzhby

Prevention of influenza and common cold in the armed forces. Voen.-med. zhur. no.11:41-44 '64 (MIRA 18:5)

UGRYUMOV, B.L.; ROZHDESTVENSKIY, V.M.; RUDNEV, G.P.; AGAFONOV, V.I.; KULAGIN, S.M.; KUCHERENKO, V.D.; KKTENKO, V.S.

Andrei IAkovlevich Alymov, d.1965; obituary. Zhur. mikrobiol., epid. i immun. 42 no.8:156-157 Ag '65. (MIRA 18:9)

AGAFONOV, Valerian Konstantinovich

Zagranichnaya okhranka; sostavleno po sekretnym "dokumentam" zagranichnoy agentury i departamenta politsiy. S" prilozheniyem" ocherka "Yevno Azef"" i spiska sekretnykh" sotrudnikov" zagranichnoy agentury. Petrograd, Moskva, Izd-vo. Kniga, 1918.
388 p.

AGAFONOV, V.K.

Personal impressions and recollections about Vladimir Ivanovich Vernadskii. Och.po ist.geol.znan. no.11:107-123 '63. (MIRA 16:7)
(Vernadskii, Vladimir Ivanovich, 1863-1945)

AGAFONOV, V. M.

USSR/Electronics - Circuits

Card 1/1 Pub 90-7/11

Author : Agafonov, V. M.

Title : Matrix coefficients for two types of elementary sections consisting of segments of two interacting long lines

Periodical : Radiotekhnika, 10, 59-65, Apr 55

Abstract : Matrix coefficients are derived for two types of four terminal networks composed of segment of two interacting long lines loaded with arbitrary resistances. A. A. Pistol'kors' equations for current and voltage values for a long line are taken as a basis for present calculations. Equations for four matrix coefficients, and an equation expressing the relationship between the matrix coefficients themselves, are derived for two simple cases of sections of interacting lines, which are viewed as four-terminal networks. Solution of these two simple types of four-terminal networks paves the way for determination of all properties of more complex circuits. Graphs. Two USSR references.

Institution: --

Translation 224440

Submitted : June 2, 1954

F-TS-8641/V

AGAFONOV, V.M.

Unusual case of prolapse of the mucosa of the urethra and urinary bladder. Khirurgiia 39 no.4:146-147 Ap'63 (MIRA 17:2)

1. Iz kafedry detskoy khirurgii (zav. - prof. M.D. Kovalevich) Rostovskogo-na-Donu meditsinskogo instituta.

MIKHAYLOVSKIY, V.T., general-mayor meditsinskoy sluzhby; AGAFONOV, V.N., polkovnik meditsinskoy sluzhby, dotsent

Epidemiological nature of influenza and problems in its prevention. Voen.-med. zhur. no.3:77-82 Mr '60. (MIRA 14:1)
(INFLUENZA)

AGAFONOV, V.P.

Late clinical forms of gunshot osteomyelitis. Trudy Inst. klin. i eksp. khir. AN Kazakh. SSR 4:53-57 '58. (MIRA 12:4)
(OSTEOMYELITIS) (ANTIBIOTICS)

PHASE I BOOK EXPLOITATION SOV/6228

Agafonov, Vasiliy Prokhorovich, and Aleksey Valer'yanovich Sakovich

Voyennaya svyaz' (Military Communications) Moscow, Voyenizdat M-va obor. SSSR, 1962. 232 p. Errata slip inserted. 8000 copies printed.

Ed.: A. V. Vrublevskiy, Engineer-Colonel; Tech. Ed.: T. F. Myasnikova.

PURPOSE: This book is intended for officers of ground forces and may also be useful to officers and noncommissioned officers in signal communications who are studying problems in military communications.

COVERAGE: The book discusses the means and types of military communications, their tasks and requirements, and methods for the organization and development of communications. According to the annotation, the book is a reflection of the viewpoints of the authors and is not to be considered as an official statement regarding military communications. The book is based on Soviet and non-Soviet open-

Card 1/2

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E039/E420

21.6000

AUTHORS: Agafonov, V.P., Govorkov, B.B., Denisov, S.P., Minarik, Ye.V.

TITLE: Determination of the efficiency of recording gamma-quanta by means of monochromatization of a beam of bremsstrahlung

PERIODICAL: Pribory i tekhnika eksperimenta, no.5, 1962, 47-50

TEXT: Description is given of a new method of investigating the energy dependence of counter efficiency. In the path of a collimated beam of bremsstrahlung (diameter 3 cm) is placed a lead target which becomes an intense source of electron positron pairs, emitted primarily in the same direction as the incident γ quanta. Electrons of a definite energy E_o, selected from the beam by means of a magnetic field, collide with a second lead target and produce γ quanta of energy E_γ (the target is sufficiently thin to avoid the probability of double radiation and for multiple scattering to be negligibly small). These γ quanta of energy E_γ are allowed to enter the telescope detector T_γ which is under investigation. Measurements were carried

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Determination of the efficiency ...

out on a beam of bremsstrahlung from the Physics Institute's synchrotron at 265 MeV. It is shown that the efficiency of a γ telescope rises steadily from a few % at 20 MeV to $\sim$ 40% at $\sim$ 150 MeV. Measurements of efficiency at two values of E_γ were made for other γ telescopes of similar construction and the results agreed within the statistical error. The variation of efficiency with thickness of the lead converter was also measured for E_γ = 60.8 MeV. A flat maximum at $\sim$ 20% is obtained for a thickness of 8 mm. There are 4 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR
(Physics Institute AS USSR)

SUBMITTED: December 25, 1961

Card 2/2

AGAFONOV, V.P.; ZHIGULEV, V.N. (Moscow)

"Estimation of influence of the relaxation boundary layer on friction and heat transfer characteristics for a supersonic flow past a wedge"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

L 7722-66 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(w)/EWP(v)/T-2/EWP(k)/EWP(t)/EWA(h)

ACC NR: AP5026938 ETC(m)/EWA(l)/EWA(c) SOURCE CODE: UR/0373/65/000/005/0154/0157

WW/EM

AUTHOR: Agafonov, V. P. (Moscow)

ORG: none

TITLE: Interaction of boundary layer with hypersonic flow in a conical nozzle

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 5, 1965, 154-157

TOPIC TAGS: nozzle, nozzle design, hypersonic flow

ABSTRACT: During flow expansion to high M numbers in converging nozzles, the boundary layer may attain a considerable thickness and, therefore, its effect on the characteristics of the isentropic flow core must be taken into consideration. In conventional nozzle design, an ideal nozzle contour is calculated and then the boundary layer thickness is added to the ideal nozzle contour without, however, allowing for interaction between the boundary layer and the flow core. In the present analysis, it was shown that by use of integral relationships for the continuity equation, a closed system of equations may be obtained and the problem of supersonic flow in a conical nozzle can be solved with allowance for flow core-boundary layer interaction. Plots of the radial and axial M number and pressure profiles showed that growth of the boundary layer may not only lead to a considerable reduction in the size of the flow core, but also cause considerable variations in all gas-dynamic parameters in the direction normal to the flow. Orig. art. has: 4 figures and 11 formulas. [PV]

Card 1/2

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ACC NR: AP5026938

SUB CODE: PR/ SUBM DATE: 23Mar65/ ORIG REF: 003/ ATD PRESS: 4142

Card 2/2

L 40751-65 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(w)/EWA(d)/EPR/T-2/EWP(k)/FCS(k)/
EWA(h)/EWA(l) Pd-1/Pr-4/Peb EM

ACCESSION NR: AP5006167 S/0258/65/005/001/0161/0165

42
41
8

AUTHOR: Agafonov, V. P. (Moscow)

TITLE: Estimate of the influence of the relaxation boundary layer on the characteristics of viscous flow around a wedge 26

SOURCE: Inzhenernyy zhurnal, v. 5, no. 1, 1965, 161-165

TOPIC TAGS: boundary layer, viscous flow, wedge flow, vibrational relaxation, friction resistance, heat flow

ABSTRACT: The author estimates the regions of influence of vibrational relaxation in air on the characteristics of flow around a wedge, for the case when a viscous boundary layer is contained inside a relaxation layer. The calculation is carried out within the framework of the theory of small perturbations of the resistance to friction and of the heat flow on the surface of a wedge having an inclination angle 40°, placed in a stream of gas with a Mach number 5 - 20. The relaxation boundary layer was shown by V. N. Zhigulev (Dokl. AN SSSR v. 144, no. 6, 1962) to exist in the case of supersonic nonequilibrium flow over a wedge, and to have a thickness of several relaxation lengths. The study is confined to the case when

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ACCESSION NR: AP5006167

the characteristics of the flow in the relaxation boundary layer vary only in a direction normal to the body, and the viscous boundary layer lies deep inside the relaxation layer. In this case it is possible to use the known self-similar solutions of the equations of boundary layer of a real gas for unperturbed flow with constant body-surface temperature. The calculations show that the presence of the relaxation boundary layer decreases the friction stress and the heat flow as compared with equilibrium flow, practically to a value corresponding to "quenched" flow. "The author thanks V. N. Zhigulev for continuous interest and a valuable discussion." Orig. art. has: 4 figures and 16 formulas.

ASSOCIATION: None

SUBMITTED: 15Nov63 ENCL: 00 SUB CODE: ME

NR REF SOV: 001 OTHER: 003

Card 2/2

AGAFONOV, V. T., Candidate Tech Sci (diss) -- "Investigation of the end equipment of half-wave lines". Tomsk, 1959. 14 pp (Min Higher Educ USSR, Tomsk Order of Labor Red Banner Polytech Inst im S. M. Kirov), 150 copies (KL, No 24, 1959, 134)

AGAFONOV, Ye.

GRAIN-DRYING

Principles for computing drying and cleaning work on collective farms. Sots.sel'.khoz. 23, no. 7, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, OCTOBER 1952. UNCLASSIFIED.

MALYAROV,V.; ZAK,G.; AGAFONOV,Ye.

Powder metallurgy. Prom.koop. no.6:19-22 Je'55. (MLRA 8:11)

1. Glavnyy inzhener arteli "8-ya mekhanicheskaya" Nauchno-issledovatel'skogo instituta mashinostroyeniya (for Malyarov) 2. Nachal'nik eksperimental'nogo tsekha (for Zak) 3. Nachal'nik tsekha poroshkovoy metallurgii (for Agafonov)
(Powder metallurgy)

ZAK, G.M.; AGAFONOV, Ye.A.; MALYAROV, V.Z.; TIMOKHINA, V., redaktor; NATAPOV, M., tekhnicheskiy redaktor

[Metalceramics in the manufacture of metal parts for consumer products] Metallokeramika v proizvodstve metallicheskikh izdelii shirokogo potrebleniia. Moskva, Vses. kooperativnoe izd-vo, 1956. 53 p. (MIRA 10:2)
(Powder metallurgy)

PALEYEV, I.I., prof.; STRAKHOVICH, K.I., prof.; AGAFONOV, Ye.A., dotsent; ZYSIN, V.A., dotsent

"Principles of the theory of heat transfer" by V.S. Zhukovskii. Reviewed by I.I. Paleev and others. Izv. vys. ucheb. zav.; energ. 5 no.6:128-129 Je '62. (MIRA 15:6)

1. Leningradskiy politekhnicheskiy institut im. M.I.Kalinina.
(Heat—Transmission) (Thermodynamics)
(Zhukovskii, V.S.)

ACC NR: AT6023557 (N) SOURCE CODE: UR/3095/66/036/000/0051/0057

AUTHOR: Neuymin, G. G.; Agafonov, Ye. A.; Kakaush, S. V.

ORG: None

TITLE: Multiple pass photometer transparency meter

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 51-57

TOPIC TAGS: oceanographic equipment, oceanographic instrument, oceanographic ship, oceanography, underwater optics, photometer, optic spectrum

ABSTRACT: The instrument described, developed in the Seas and Oceans Optics Laboratory of the Maritime Hydrophysical Institute of the Academy of Sciences of the Ukranian SSR permits direct measurement of the transparency of sea water to white light, as well as to certain narrow spectral fields, at depths of up to 300 meters. The proposed instrument, an optical diagram of which is shown and discussed, is based on the theoretical consideration that the accuracy of transparency measurement is optimized with light passing twice through the medium under study. It compares the beam under study with a supporting beam on a single photo-receiver. The system is said to eliminate the influence of such factors as fluctuations in the intensity

Card 1/2

L 8000-66 EWT(1) GW

ACC NR: AP5026541 SOURCE CODE: UR/0286/65/000/019/0084/0085

AUTHORS: Neuymin, G. G.; Agafonov, Ye. A.; Anikin, Yu. A.; Karaush, S. V.

ORG: none

TITLE: Double-channel compensational photometer. Class 42, No. 175271

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 84-85

TOPIC TAGS: photometer, photometry, underwater light, data recording, water depth meter, sea water

ABSTRACT: This Author Certificate describes a double-channel compensational photometer containing one source and one receiver of radiation, a modulator, spherical mirrors, a photometric wedge, and a device for automatic data recording (see Fig. 1). To increase the measuring range and to insure selection of optimum measuring conditions, the spherical mirrors in each channel have identical focal lengths. To determine the coefficient of transparency of sea water as a function of depth, a pressure transducer (depth meter) is attached to the submerged part of the photometer.

Card 1/2 UDC: 535.242.2

L 8000-66

ACC NR: AP5026541

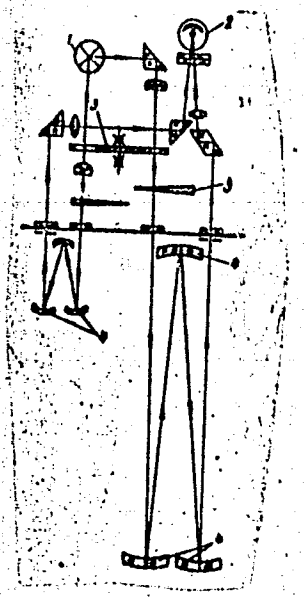

Fig. 1. 1- radiation source; 2- radiation receiver; 3- modulator; 4- spherical mirrors; 5- photometric wedge

Orig. art. has: 1 figure.

SUB CODE: OP/ SUBM DATE: 24Feb64

Card 2/2

AGAFONOV, Ye.F.

YEFIMOV, V.I.; KHUDYAKOV, N.V.; SBITNEV, L.P.; ROMANOVSKIY, V.E.; KHOLIN, I.R.; POPOV, V.I.; OSIPOV, G.P.; PISKAREV, V.S.; AGAFONOV, Ye.F.; DORODNOV, P.G.; STRUKACHEV, V.I.; ZAYTSEV, Yu.A.

A.A.Klimov's book "Electricity in animal husbandry." Reviewed by V.I.Efimov and others. Elektrichestvo no.9:87-88 S '56. (MLRA 9:11)

1. Kafedra primeneniya elektricheskoy energii v sel'skom khozyaystve Stalingradskogo sel'skokhozyaystvennog instituta (for Yefimov, Khudyakov, Sbitnev, Romanovskiy, Kholin). 2. Kafedra primeneniya elektroenergii v sel'skom khozyaystve Saratovskogo instituta mekhanizatsii sel'skogo khozyaystva imeni Kalinina (for Popov, Osipov, Piskarev, Agafonov, Dorodnov, Strukachev, Zaytsev). (Electricity in agriculture) (Stock and stockbreeding)

TIKHOMIROV, I.A., kand.tekhn.nauk; DEMCHUK, P.A., gornyy inzh.;
AGAFONOV, Ye.M., gornyy inzh.; BUZ'KO, A.S., gornyy inzh.

Using the EPM-1 rock loader in the drifting of inclines.
Ugol' Ukr. 6 no.1:31-33 Ja '62. (MIRA 15:2)
(Coal mining machinery)

DAKHNO, G., inzh.; AGAFONOV, Yu., inzh.; IVONCHIK, A., tekhnik

Reserves for lowering the cost of pile foundations in Noril'sk.
Zhil. stroi. no.1:12-14 '64. (MIRA 18:11)

AGAFONOV, Yu.P.; STARINKEVICH, A.K., inzhener, redaktor; TUROVSKIY, B.I., redaktor

[City underground systems; their location] Gorodskie podzemnye seti; metody razmeshcheniia. Pod red. A.K.Starinkevicha. Kiev, Izd-vo Akademii arkhitektury USSR, 1949. 127 p. (MLRA 7:10)
(Municipal engineering)

AGAFONOV, YU. P.

Vsesoyuznoye ob"yedinennoye soveshchaniye po avtomatizatsii proizvodstvennykh protsessov v mashinostroyenii i avtomatizirovannomu elektroprivodu v promyshlennosti. 3d, Moscow, 1959

Elektroprivod i avtomatizatsiya promyshlennykh ustanovok; trudy soveshchaniya (Electric Drive and Automation in Industrial Systems; Transactions of the Conference) Moscow, Gosenergoizdat, 1960. 470 p. 11,000 copies printed.

General Eds.: I.I. Petrov, A.A. Sirotin, and M.G. Chilikin; Eds.: I.I. Sod, and E.F. Silayev; Tech. Eds.: K.P. Voronin, and G.Ye. Larionov.

PURPOSE: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

COVERAGE: The book is a collection of reports submitted by scientific workers at plants, scientific institutes and schools of higher education at the third Joint All-Union Conference on the Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1959. The Conference was called by the Academy of Sciences USSR, the Gosplan SSSR (State Planning Commission USSR), the GNTK SSSR, the Gosudarstvennyy Komitet po avtomatizatsii i mashinostroyeniyu (State Committee on Automation and Machine Building) and the Natsional'nyy Komitet SSSR po avtomaticheskomu upravleniyu (USSR National Committee on Automatic Controls) and prepared by the Nauchno-tekhnicheskiy komitet po avtomatizirovannomu elektroprivodu (Scientific and Technical Committee on Automated Electric Drives), the MEI (Moscow Institute of Energetics), the VNIIEM, the IAT (Institute of Automation and Telemechanics) of the Academy of Sciences USSR, and the Komissiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission on the Technology of Machine Building of the Institute of Science of Machines of the Academy of Sciences USSR). It was the purpose of the Editorial Board to arrange the reports in a way which would ensure a relatively systematic presentation of theoretical and practical problems relating to electric drives and automatic controls of industrial mechanisms used in various branches of industry. Basic problems of automated electric drive and their solution are outlined. The book also contains articles on electric machinery and means of automation. Considerable attention is paid to noncontact automatic control systems, including systems with semiconductor devices and magnetic amplifiers, and to computers intended both for the analysis and the synthesis of linear and nonlinear automatic regulation and control systems. Reports already published in journals or official publications have been considerably abbreviated; those which have appeared in volume V of MII EP transactions or in the journal "Elektrichestvo" are marked with an asterisk. No personalities are mentioned. References accompany some of the papers.

PART I. GENERAL PROBLEMS CONCERNING THE THEORY AND PRACTICE OF ELECTRIC DRIVE AND AUTOMATION OF CONTROL

1/4

SHUBENKO, Vitaliy Aleksandrovich, kand.tekhn.nauk, prof.; AGAFONOV, Yuriy Petrovich, starshiy prepodavatel'

Characteristic speed zones in impulse control of asynchronous motors. Izv. vys. ucheb. zav.; elektromekh. 5 no.12:1345-1354 '62. (MIRA 16:6)

1. Zaveduyushchiy kafedroy elektrifikatsii promyshlennykh predpriyatiy Ural'skogo politekhnicheskogo instituta (for Shubenko). 2. Kafedra energetiki Kurganskogo mashinostroitel'nogo instituta (for Agafonov).

(Electric motors, Induction) (Automatic control)

SHUBENKO, V. A., kand. tekhn. nauk; ZENKIN, N. I., inzh.; KIRPICHNIKOV, V. M., inzh.; AGAFONOV, Yu. P., inzh.

Some problems in the study of transient phenomena in asynchronous motors. Izv. vys. ucheb. zav.: gor. zhur. no.10:125-137 '61. (MIRA 15:10)

1. Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (for Shubenko, Zenkin, Kirpichnikov). 2. Kurganskiy mashinostroitel'nyy institut (for Agafonov). Rekomendovana kafedroy elektrifikatsii promyshlennykh predpriyatiy Ural'skogo politekhnicheskogo instituta.

(Electric motors, Induction)
(Automatic control)

SHUBENKO, Vitaliy Aleksandrovich, dr. tekhn. nauk, prof.; AGAFONOV, Yuriy Petrovich, kand. tekhn. nauk

Effect of initial conditions on the nature of pulsed control of asynchronous short-circuited motors. Izv. vys. ucheb. zav. elektromekh. 7 no.4:479-490 '64 (MIRA 17:7)

1. Zaveduyushchiy kafedroy elektroprivoda i avtomatizatsii promyshlennykh ustanovok Ural'skogo politekhnicheskogo instituta (for Shubenko). 2. Zav. kafedroy energetiki Kurganskogo mashinostroitel'nogo instituta (for Agafonov).

ACCESSION NR: AP4031680 S/0286/64/000/005/0049/0049

AUTHOR: Agafonov, Yu. V.; Mindorskiy, Ye. V.; Savkin, V. A.; Shcherbakov, V. A.

TITLE: Optical device for measuring gyroscope drift

SOURCE: Byulleten' izobreteniy i tovarny*kh znakov, no. 5, 1964, 49

TOPIC TAGS: gyroscope, gyroscope drift

ABSTRACT: An optical device for measuring gyroscope drift by means of an optical system, a screen and a universal microscope projection hood, distinguished by the fact that, in order to increase the measurement accuracy and provide the possibility of conducting such measurements in a darkened room, the projection hood contains a rectangular prism and a collimating lens. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 05Jul62 ENCL: 01

SUB CODE: NG NO REF SOV: 000 OTHER: 000

Card 1/2

ACCESSION NR: AP4031680

ENCLOSURE: 01

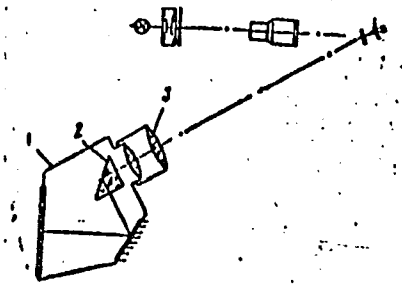

Fig. 1. 1 - projection hood; 2 - rectangular prism; 3 - collimating lens.

Card 2/2

The effect of liming and boron fertilizers on the crop of potatoes and buckwheat [illegible]

[illegible] NPK [illegible]

the effect being greatest during flowering and starch accumulation. B also aids the transport of carbohydrates throughout the plant structure from the leaves to the roots and reproductive organs. M. [illegible]

AGAFONOVA, A. F.

USSR/Plant Physiology Mineral nutrition H-3

Abs Jour : Referat. Zh - Biol., No 6, 25 March 1957, 22382

Author : Agafonova, A.F.
Inst : Not given
Title : The effect of boron in soil liming on plant chemical composition.

Orig Pub : Tr. Vses. n.-i. in-ta udobr., agrotekhn. i agropochvoved., 1955, No 31, 331-347

Abstract : The effect of liming and boron fertilizers under conditions of a vegetative experiment was studied in relation to the content of B, P and Ca in plants (wheat, oats, buckwheat, sunflower, mustard, clover, hemp, chick-pea, tomato, radish, sour grass, makhorka, rhubarb, begonia). Upon liming the plant content of boron was diminished (especially in dicotyledons). The sharpest drop was in the upper leaves; an insignificant one in the stems, roots and lower leaves. Boron fertilizers increased the relative and absolute content of B in the plants. The content of total phosphorus in leaves was not affected by the use of lime and boron. As opposed to lime, boron did increase the relative content of organic phosphates in buckwheat

Card 1/2 -22-

USSR / Plant Physiology. Mineral Nutrition. I

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34274

Author : Agafonova, A. F.
Inst : AS LatvSSR (Study made by the All-Union Institute of Fertilizers, Soil Science and Agricultural Engineering, USSR)
Title : On the Distribution of Cobalt in Plants.

Orig Pub : V sb.: Mikroelementy v s. kh. i meditsine, Riga, AN LatvSSR, 1956, 213-219

Abstract : By methods of chemical analysis, radioautography and measurements of activity of γ-radiation, studies were made with regard to distribution of Co in various organs and tissues of shoots of turnip, mustard, beans and table beets of 6-30 day growth and cultivated on limed and nonlimed containing soils with addition of common Co and small quantities of radioisotope (Co^{60}). Co was concentrating more than in the middle parts. A considerable amount of Co was discovered in the roots.

Card 1/2

USSR / Forestry. Forest Crops. K-3

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24912.

Author : Povet'ev, A. A.; Agafonova, A. F.
Inst : Not given.
Title : Snow-Screening Afforestations of Multi-Zone Broken-Construction.

Orig Pub: Tr. Vses. n.-i. in-ta zh.-d. transp., 1957, vyp. 129, 5-29.

Abstract: Results are produced of the raising of multi-row one-zone snow-screening afforestations in 1920-1930 on the weak and average solonetz soils of the chestnut zone of Zavolzh' and Kazakhstan, as well as on the soils not having supplementary irrigation, these

Card 1/3

J

Country : USSR
Category: Soil Science. Tillage. Reclamation. Erosion.

Abs Jour: RZhBiol., No 18, 1958, No 82148

Author : Agafonova, A.F.
Inst : All-Union Scientific Research Institute of Railroad Transportation.
Title : Experimental Studies and Postitive Results of the Amelioration of Solonetz and Strongly Alkaline Soils due to Forest Shelterbelts.

Orig Pub: Tr. Vses. n.-i. in-ta zh -d. transp., 1957, vyp. 129, 49-63

Abstract: For improvement of the crust solonetz soil at the Dzhanybekskiy Station of the Institute of Forestry of the Academy of Sciences USSR, gypsum was applied

Card : 1/3

Country : USSR
Category: Soil Science. Tillage. Reclamation. Erosion.

J

Abs Jour: RZhBiol., No 18, 1958, No 82148

of the gypsum is advised to cut down on water evaporation. To provide additional moistening after the gypsum had been dispensed, dirt mounds 20-30 cm high and with slopes 1:7 - 1:10 across 20 40 m were erected to retain melted waters on the plowed field. It is suggested that 20-40 t/hectare of manure or compost be added and that green manure (sweet clover, field mustard, and perennial rye) be sowed. Examples are given of agrotechnical measures for reclaiming solonetz and strongly alkaline soils. -- V.A. Shreyder

Card : 3/3

AGAFANOVA, N. F.

AID Nr. 990-8 14 June

HEAT TRANSFER BETWEEN A HOT SURFACE AND A GAS STREAM CARRYING LIQUID DROPLETS (USSR)

Paleyev, I. I., and A. F. Agafanova. IN: Teplo- i massoperenos, tom II: Teplo- i massoperenos pri fazovykh i khimicheskikh prevrashcheniyakh (Heat and mass transfer, v. 2: Heat and mass transfer during phase and chemical transformations). Minsk, Izd-vo AN BSSR, 1962. 260-268.
S/862/62/002/000/027/029

Flow characteristics and heat transfer were studied in systems in which water droplets suspended in an air stream flowed through a heated tube. The amount of droplets settling at the wall, the concentration of droplets at the outlet, the amount of liquid in the film, and the water and air flow rates were measured in a test section 40 mm wide, 300 mm long and 4 mm high into which water was injected through a centrifugal nozzle. The experiments were conducted at water injection rates of 20 to 28 l/hr,

Card 1/2

AID Nr. 990-8 14 June

HEAT TRANSFER BETWEEN A HOT SURFACE (Cont.)

S/862/62/002/000/027/029

flow velocities of 60 to 170 m/sec, and mean droplet diameters of 9 to 16 μ. Heat transfer in an electrically heated nickel tube 150 mm long was studied at 1 to 3 atm, air velocities of 100, 147 and 170 m/sec, and initial water concentrations of 0.2 to 2.5 kg/m^3. When the wall temperature exceeded a certain value, critical heat-flux densities of $(0.8 \text{ to } 2.3) \cdot 10^6$ kcal/m^2·hr were reached at all air and water flow rates tested, and in some cases tube burnout was observed 10 to 15 mm from the outlet. At constant water concentration the heat transfer increased with increasing flow velocity and pressure. Heat-transfer coefficients calculated for different air-water ratios were 40 to 60 times higher than for pure air and about 10 to 17 times higher than for water. The study was made at Leningrad Polytechnic Institute imeni M. I. Kalinin. [PV]

Card 2/2

[illegible]

"Selenic Acid as a [illegible]," [illegible] AN SSSR, 40, No.9, 1943

Moscow Order of Lenin Aviation Inst, [illegible]

AGAFONOVA, A. L.

"The Second Dissociation Constant of the Selenic Acid". (p. 1060)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1947, Vol. 17, No. 6

AGAFONOVA, A.L.

(3)

Temperature dependence of the dissociation constants of electrolytes. II. First and second dissociation constants of arsenic acid. A. L. Agafonova and L. L. Agafonov (A. A. Zhdanov Polytech. Inst., Gorki). *Zhur. Fiz. Khim.* 27, 1137–44(1953); cf. *C.A.* 45, 2583c.—The 1st (k_1) and 2nd (k_2) dissocn. consts. of H_3AsO_4 were detd. potentiometrically at 5° temp. intervals between 0 and 50°. Solns. contg. $Na_4As_2O_7$ and HCl in molar ratio 1:3 in 0 concns. and 1:1.45 in 0 concns. were used for k_1 and k_2, resp. Exptl. data, as well as calcd. values of k_1, k_2, ΔF, ΔH, Δc_p, and ΔS are shown in tables and graphs. The const. k_1 is 0.00805, 0.00758, and 0.00380 at 0, 25, and 50°, resp.; k_2 is 0.883×10^{-7}, 1.047×10^{-7}, and 1.048×10^{-7} at 0, 25, and 50°, resp. The temp. dependence of k_1 and k_2 is given by the equations $\log k_1 = -2.014 - 5 \times 10^{-5}(t - 40.0)^2$ and $\log k_2 = -6.971 - 5 \times 10^{-5}(t - 39.4)^2$, where t is the temp.

J. W. Lowberg, Jr.

11/19/54

AGAFONOVA, A.L.

USSR/Chemistry - Analytical chemistry

Card 1/1 Pub. 147 - 20/26

Authors : Agafonov, I. L.; Agafonova, A.L; and Shcherbakov, I. G.

Title : Complex formation studied by the electrical conductivity method. About Cu-complexes in the $CuSO_4$-$Na_4P_2O_7$-H_2O system.

Periodical : Zhur. Fiz. khim. 28/1, 147-160, Jan 1954

Abstract : The specific electrical conductivity of mixed aqueous $CuSO_4$ and $Na_4P_2O_7$ solutions was investigated at temperatures and concentrations applicable in galvanostegy. The complex formation of $Na_6Cu(P_2O_7)_2$ in a relatively concentrated sodium pyrophosphate solution during the addition of $CuSO_4$ to that solution was established. Further addition of $CuSO_4$ resulted in the formation of less soluble residue of the complex $Na_2Cu_3(P_2O_7)_2$ compound which consequently converted into $Cu_2P_2O_7$. It is evident from the above mentioned results that the measurment of the electrical conductivity of aqueous solutions of inorganic salts, carried out within temperature and concentration limits in which the formation of complex compounds can be expected, is an effective physico-chemical analysis method. Twelve references : 6-USSR; 3-USA; 2-German and 1-English (1848-1951). Tables; graphs.

Institution : The A. A. Zhdanov Polytechnicum, Gorkiy

Submitted : April 14, 1953

MOLODOVSKIY, V.A., kand. tekhn. nauk; AGAFONOVA, A.L.;
GRANENOVA, V.P.; KOZYULINA, R.M., red.

[Laboratory work in physical chemistry] Praktikum po fizicheskoi khimii. Gor'kii. No.3-4. 1963.
(MIRA 17:7)

1. Gorkiy. Politekhnicheskiy institut.

ACCESSION NR: AP4019519 S/0076/64/038/002/0356/0360

AUTHORS: Agafonov, I.L. (Gor'kiy); Agafonova, A.L. (Gor'kiy)

TITLE: Interrelation of atomic and molecular refraction and total ionization

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 2, 1964, 356-360

TOPIC TAGS: atomic refraction, molecular refraction, total ionization, butane, ionization cross section

ABSTRACT: Starting with a definition of total ionization, s_i, as a relation of total intensity of all mass spectrum lines to the pressure of the same substance in the release system, the authors find that different instruments differ in their readings. Therefore, they suggest taking s_i for n-butane as unity and expressing the s_i values for other substances in relation to unity. Earlier they have observed a dependence of the relative electric negativity on atomic refraction and arrived at the conclusion that there should be a relationship between the atomic (or molar - in case of compounds) refraction and the capacity of atoms or molecules to be positively

ACCESSION NR: AP4019519

ionized under the action of an electron impact. Cases of total ionization and ionization cross sections against atomic and molecular refraction are reviewed and approximation equations for this dependence are derived. In the cases discussed it is possible to determine the ionization cross section as a result of an electron impact with an average accuracy of 8 and 13%, in the first and second case, respectively. For a number of substances, total ionization can be determined with an accuracy of 7.7 - 4.7%. "Gratitude is expressed to Prof. G.G.Devyatykh for the attention he paid to this work. Data contained in an extensive table for 38 substances were the result of cooperation with N.V. Larin." Orig. art. has: 8 formulas, 1 table.

ASSOCIATION: Nauchno issledovated'skiy institut khimii pri Gor'kovskom gosud.universitete im. N.I. Lobachevskogo (Scientific Research Inst. of Chem., Gor'kiy State University)

SUBMITTED: 24Jan63 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: GP NR REF SOV: 004 OTHER: 007

Card 2/2

AGAFONOV, I.I.; AGAFONOVA, A.L.

Interrelation between atomic and molecular refraction and complete ionization. Zhur. fiz. khim. 38 no.2:356-360 F '64. (MIRA 17:8)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete imeni N.I. Lobachevskogo.

LAYNER, D.I.; BAZHENOVA, L.A.; AGAFONOVA, A.V., Prinimali uchastiye: PAKHOMOVA, Ye.F., inzh.; KORSUNSKAYA, K.N., inzh.

Effect of various additions on the modification and recrystallization temperature of zinc. Trudy Giprotsvetmetobrabotka no.20:81-96 '61. (MIRA 15:2)

(Zinc—Metallurgy) (Crystallization)

D I AGAFONOVA, A D AZT'YAN, B A GOVOROV, V P RACHENKO, N K MYASNIKOV, L A LAMOVA, YE A SORVIN, A I KABANOV

"Development of Recomendations on the Selection of Types of Electrovacuum Devices in Standard Circuits Used in Radio Engineering Apparatus and on the Procedure for Determination of Optimal and Limiting Allowable Operating Conditions for Some Types of Receiver-Amplifier Tubes in Mass Production Which Have Prospects for these Applications" from Annotations of Works Completed in 1955 at the State Union Sci. Res. Inst: Min. of Radio Engineering Ind.

So: B-3,080,964

LAYNER, D.I.; TIKHONOV, B.S.; KRUPNIKOVA-PERLINA, Ye.I.; AGAFONOVA, A.V.

Investigations in the field of improving service characteristics of zinc for printing purposes. Trudy Giprotsvetmetobrabotka no.20:97-103 '61. (MIRA 15:2)

(Zinc--Metallurgy)

AGAFONOVA, F.A.

AUTHORS Agafonova, F.A. Gurevich, M.A. Paleyev, I.I. 57-8-23/36

TITLE A Contribution to the Theory of Burning of the Liquid Fuel Drop.
(K teorii goreniya kapli zhidkogo topliva.)

PERIODICAL Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 8, pp. 1818-1825 (USSR)

ABSTRACT Calculations based on a number of simplified assumptions, which are consequently of approximate nature, are given. Inspite of these insufficiencies they make possible the following conclusions: 1.- The fact that the diffusion theory in the case of the experiment offers coinciding evaporation - velocity values can not yet be taken as proof for a combustion process of liquid fuel taking place on the basis of pure diffusion. Practically the same evaporation velocities are obtained in the case of a taking account of the finite velocity of the chemical reaction.
2.- The consideration of the velocity of the chemical reaction leads to much smaller calculation of the maximum temperature in the case of the same evaporation velocity. This is proved qualitatively by the experiment.
3.- Taking into account the velocity of chemical reaction leads to an approach between the zone with maximum

CARD 1/2

82805
S/124/60/000/005/004/007
A005/A001

11.5000

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 5, pp. 49-50, # 5844

AUTHORS: Paleyev, I.I., Agafonova, F.A.

TITLE: Investigation of the Combustion of Liquid Fuel Droplets

PERIODICAL: V sb.: Vopr. aerodinamiki i teploperedachi v kotel'no-topochn. protsessakh. Moscow-Leningrad, Gosenergoizdat, 1958, pp. 57-80

TEXT: The combustion rate of droplets of solar oil and mazout was studied under conditions similar to the conditions of the combustion within the combustion chambers of gas turbines. It is shown in computational way that the temperature at the combustion surface can be assumed to be equal to the theoretical fuel combustion temperature within a medium having the same temperature and constitution, when the excess-air coefficient amounts to $\alpha = 1$; this result is based on the G. A. Varshavskiy formulae (for calculating the combustion of a droplet having at a definite instant a prescribed dimension), developed on the assumption that the losses by emitting into the surrounding medium (chambers with high forcing) are relatively small and that the equality $D = \alpha$ is valid

Card 1/4

82805
S/124/60/000/005/004/007
A005/A001

Investigation of the Combustion of Liquid Fuel Droplets

(D is the diffusion coefficient, α is the thermal-diffusivity coefficient). It was stated in experimental way that the partial vapor pressure (when the droplet evaporates during the combustion process) is determined, to a first approximation, by the medium fraction corresponding approximately to 50% distillation. It turned out that the computational combustion rate according to the diffusion theory appears too high in comparison with the experimental rate, when the maximum actual temperature in the droplet's vicinity is used in calculations. Some conditions are mentioned, which are not taken into account by the computation procedure and may lead perhaps to a raise of the combustion duration. A special experimental unit was built for performing the first series of experiments with relatively large fuel droplets supplied into the stream near the thermo-couple joint and burnt at the thermo-couple. The temperature within the furnace was maintained constant at about 1,000°C, the relative flow velocity amounted to 0.5 - 1.0 m/sec. The air consumption amounted to 170 cm^3/sec of st. air. The sequence of engaging the equipment from the instant of droplet supply into the stream was performed automatically. The evaporation temperature was recorded with an accuracy up to 0.5% by a platinum-iridium thermo-couple with an electrode diameter of 10 μ. The droplet dimension amounted to 0.9-1.5 mm.

Card 2/4

82805

S/124/60/000/005/004/007
A005/A001

Investigation of the Combustion of Liquid Fuel Droplets

Curves of the variations of the droplet's diameter and temperature versus the time are plotted by evaluating the experimental data. It is stated in the first part of the experimental work that the diffusion theory may be applied to calculating the combustion rate of an individual droplet under the condition that the Nusselt number is assumed to be 1.3 - 3.0 times greater than it results from the Reynolds number. A series of tests was performed with benzene for refining the calculation scheme; benzene differs from the polyfractioned mazout and solar oil by the definiteness of the physical constants. It turned out that the computational temperature is lower than the experimental, which may be explained to a considerable extent by heat supply to the thermo-couple electrodes. In the second part of the experimental work, the combustion of mazout- and solar oil droplets in suspended state was investigated. The test unit consisted of a vertical furnace with d = 75 mm and H = 550 mm and with a window along the wall having 10 mm in width and 400 mm in height, of a pneumatic sprayer with cooled diaphragms, an air preheater, a fuel tank, delivery pumps, and a photocamera. The temperature of the furnace walls was maintained constant within the limits from 930 to 950°C. The rate of air flow through the furnace amounted to 700-800 cm^3/sec of st. air. The combustion of solar oil droplets of 193, 161 and 150 μ diameter and mazout droplets

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AUTHORS: Agafonova, F.A., Gurevich, M.A. and Tarasova, Ye.F.

TITLE: Conditions of stability of combustion of individual droplets of liquid fuel

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, 1961, No.6, p.8, abstract 6G55 (Sb. 3-e Vses. soveshchaniye po teorii goreniya. T.2., M., 1960, 29-39)

TEXT: In analysing the operation of liquid fuel fired furnaces, it is important to know whether the fuel drops are in the state of combustion or evaporation. Under these conditions the speeds of evaporation of the drops may differ by several times and this greatly influences the length of the flame. It was observed repeatedly that the diffusion theory is not suitable for analysis of the conditions of ignition and extinction. An approximate analysis of the conditions of ignition, extinction and completeness of combustion is possible if the final reaction speed is taken into consideration. An equation of heat and mass transfer, taking into consideration the chemical reactions, is given which was compiled

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on the assumption that the process of combustion develops within the limits of a spherical layer (reduced film). The process of combustion and transfer are assumed as being quasi-stationary and the physical constants as not being dependent on the temperature and the local composition of the mixture. In principle, solution of the derived equations should enable obtaining relations between the parameters which determine the conditions of ignition and extinction of a drop, the maximum temperature and the fraction of unburned vapours for any condition of combustion of the drop. However, the large number of parameters and the laboriousness of the calculations hardly permits using them on a large scale. Therefore, in addition to analysing the equations, experimental work was carried out for the purpose of verifying the main conclusions and for accumulating data on the stability of combustion of drops. Gasoline drops of 0.2 to 0.5 diameter were fed into a vertical furnace by means of a special dropper. At the entry into the furnace, the drops were ignited by a gas flame and burned completely in the furnace. The gas sucked from the furnace was bubbled through a solution of sodium nitrate in concentrated

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sulphuric acid. Under the influence of hydrocarbon vapours, this solution became yellow; this occurred in all the experiments. A dependence of the fraction of unburned vapours on the flow speed was established. A series of tests were made for determining the limits of stability of combustion of the drops. Gasoline and kerosene drops with initial diameters of 1.5 to 2 mm on a quartz suspension device were used. Dependences were established of the "tear-away" speed of the flow on the temperature of the air and on the content by volume of oxygen in the stream. It was found that the "tear-away" speeds for falling drops are considerably higher than for suspended ones. 7 references.
Abstracted by S. Tager.

[Abstractor's Note: Complete translation.]

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AGAFONOVA, F. A.; GUREVICH, M. A.; TARASOVA, Ye. F.

"Self-ignition and drop induction period of liquid fuel."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

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AUTHORS: Agafonova, F. A., Gurevich, M. A., Tarasova, Ye. F.

TITLE: Conditions for stable burning of singular drops of liquid fuel

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 8, 1961, 76-77, abstract 8B531 (V sb. "3-ye Vses. soveshchaniye po teorii goreniya. T. 2". Moscow, 1960, 29-39)

TEXT: To describe the stationary burning of a spherical fuel drop, being in the gas flow containing oxygen, the authors write down the system of the following equations: heat conductivity, oxygen diffusion and diffusion of fuel vapors. It is assumed that chemical reaction proceeds within a spherical layer whose thickness is calculated by the formula: $\delta = 2r_o/(N-2)$, where r_o is radius of drops, N is Nusselt number; that reaction is bimolecular, main constants: λ, $D \cdot \rho$, c_p, do not depend on temperature and gas content in the reduced film, and that Lewis number $\lambda/c_p D\rho = 1$. Thermal diffusion and Stephan's flow are not taken into account. The equations are complemented with 7 boundary conditions which express in mathematical form that: 1) there is no flow of oxygen into the drop; 2) the full flow of gas from the drop surface is flow of vapors;

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3) heat supplied to the drop is consumed in evaporation; 4) temperature of the drop is known and is practically equal to boiling temperature; 5), 6), 7) at the boundary of the reduced film, the temperature, oxygen concentration and fuel vapor concentration are known and equal to these quantities in the main gas flow; the latter of them is equal to zero. The quantity sought for is drop evaporation rate. After introducing new dimensionless variables, three basic equations are reduced to a completely similar form, differing only in boundary conditions. This makes it possible to establish a simple connection between dimensionless concentrations of reagents and temperature, and to reduce thereby the solution of the system of equations to the solution of one dimensionless equation of heat conductivity. This result is, to a certain extent, a generalization of the conclusion about the similarity between the fields of concentration and temperature, arrived at by Zel'dovich and Frank-Kamenetskiy (Zh.fiz. khimii, 1938, v.12, 100), to the case when dimensionless equations of diffusion and heat conductivity have different boundary conditions. Formulae are derived for extreme cases: a) evaporation without burning, b) diffusional burning. Numerical integration for some sets of parameters leads to the results obtained earlier (Zh. tekhn. fiziki, 1957, v. 27, no. 8, 1818-1825; RZhMekh, 1960, no. 5, 5688) on a one-dimensional model: 1) In a general case three solutions are possible: a) con-

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ditions close to evaporation, b) unstable conditions, c) burning. 2) Evaporation rate differs very slightly from that calculated by the diffusion formulae. 3) Maximum temperature differs essentially from temperature in the diffusion burning zone. 4) A marked fraction of vapors left the boundaries of the reduced film without being burnt. A part of calculations was performed on an electronic computer. The authors point out that it is practically impossible to obtain complete information by numerical integration, because of the great number of parameters (7) entering the basic dimensionless equation. Therefore, it is recommended to solve particular problems by the experimental method. The results of experiments conducted are described. The presence of unburnt vapors was noticed during burning of gasoline drops (0.2 - 0.5 mm in diameter) in a furnace ventilated with an air ascending flow; passing the gas, sucked out from various spots of the furnace, through the solution of sodium nitrate in concentrated sulfuric acid resulted in its coloration in yellow color. The results of experiments on burning gasoline and kerosene drops (with initial diameter 1.5 - 2 mm; 0.2 - 1 mm) are presented in the form of the curves of the critical flow velocity (with respect to the drop blown off) at which flame is extinguished, as a function of temperature of the blowing air, oxygen concentration and drop diameters. It was discovered that critical velocity depends on direction. Thus

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